

REMARKS

Claims 1-20 are pending in this application. Claims 1 and 2 have amended. New claim 20 has been added, leaving claims 1-3 and 7-20 remaining. Claims 3 and 7-19 have been withdrawn, subject to Applicants request for rejoinder. Claims 4-6 were previously canceled.

The amendments do not introduce new matter within the meaning of 35 U.S.C. §132. Basis for the claim amendments is found on pages 3-7; in claims 1-19 as originally filed; and elsewhere throughout the specification and claims. Accordingly, entry of the amendments is respectfully requested.

1. Restriction

Applicants have previously requested rejoinder of claims 7-19, directed to a process for making the inventive compounds, which have the same limitations as, or are dependent from, the compound claims as ultimately allowed, under the mandatory rejoinder provisions of MPEP §821.04. Applicants respectfully request that the Examiner notify Applicants of the scope of allowed compound claims prior to issuance of a Notice of Allowance, so that appropriate amendments, if any are necessary, may be entered for the process claims.

**2. Rejection of Claims 1 and 2 under 35 U.S.C. §112,
second paragraph**

The Office Action rejects claims 1 and 2 under 35 U.S.C. §112, second paragraph, for the following reasons:

In claim 1, under the definition of Ar, the "and" should be changed to an "or". In claim 2, compound viii lacks antecedent basis from claim 1 since the R variable in claim 1 represents a linear or branched C1 to C5 alkyl chain and not an alkenyl as present in compound viii. Claim 2 does not conform to M.P.E.P. 608.01(m) since each claim must end with a period.

Claim 1 has been amended to indicate that an R substituent is selected in the alternate, not the conjunctive, and thus Applicants have changed the "and" to an "or". Applicants have also amended claim 1 to include 2-propenyl as a substituent for variable R, in order to provide antecedent basis for compound viii. Applicants have amended claim 2 to include a period at the end. These amendments obviate this rejection.

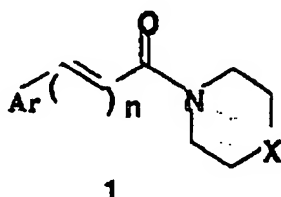
Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw the rejection of claims 1 and 2 under 35 U.S.C. §112, second paragraph.

3. Rejection of Claim 1 under 35 U.S.C. §102(a)

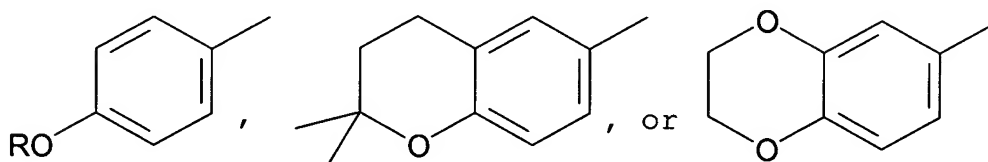
The Office Action rejects claim 1 under 35 U.S.C. §102(a) as being anticipated by CA Registry No. 349578-28-5 (entry date into the CAS Registry file is July 31, 2001). As the basis for this rejection, the Office Action states:

CA Registry No. 349578-28-5 is embraced by the instant claimed invention and thereby, anticipates the instant claimed invention.

Applicants respectfully traverse this rejection on the basis that CA Registry No. 349578-28-5 fails to teach the claimed subject matter, as amended. Applicants' claim 1, as presently amended, is directed to a compound of Formula I



wherein, among other structural characteristics, Ar is



and R is linear or branched C₂ to C₅ alkyl chain or 2-propenyl.

By contrast, CA Registry No. 349578-28-5 discloses a compound where the moiety of the disclosed compound corresponding to Ar is 1,3-benzodioxol-5-yl.

To constitute anticipation under 35 U.S.C. § 102, all material elements of a claim must be found in one prior art source. In re Marshall, 577 F.2d 301, 198 USPQ 344 (CCPA 1978); In re Kalm, 378 F.2d 959, 154 USPQ 10 (CCPA 1967). The disclosure in CA Registry No. 349578-28-5 is not a disclosure of a claimed compound. Thus, CA Registry No. 349578-28-5 does not anticipate the present claims.

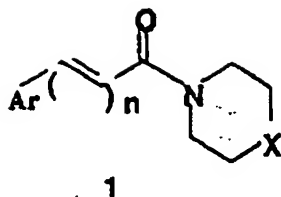
Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

4. Rejection of Claims 1 and 2 under 35 U.S.C. §102(b)

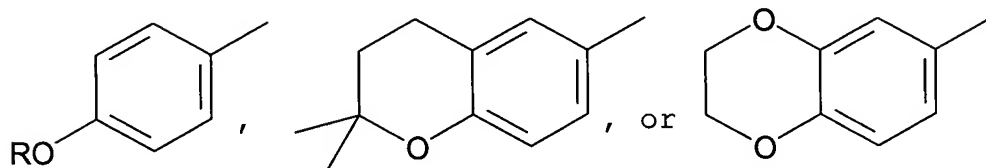
The Office Action rejects claims 1 and 2 under 35 U.S.C. §102(b) as being anticipated by a) Explore Library Collection (September 18, 2000) - see CA Registry No. 321689-62-7; b) Koul et al. {CA 132 :231517, 2000} - see the compound of CA Registry No. 261913-02-4; c) Sharpless et al. {U.S. Pat. 6,008,376} - see Entry 7 in Figure 2 on Sheet 2 of 5; d) Oediger et al. {U.S. Pat. 4,209,445} - see Example No. 3 in Table 1 in columns 7 and 8; e) Do et al. {CA 107:39671, 1987} - see the compounds of CA Registry Nos. 26163-80-4 and 74957-53-2; and f) Puscaru et al. {CA 56:38494, 1962} - see the compound of CA Registry No. 92648-53-8. As the basis for this rejection, the Office Action states:

Each of the above cited prior art disclose at least one compound which is embraced by the instant claimed invention.

Applicants respectfully traverse this rejection on the basis that each of the cited references fails to teach the claimed subject matter, as amended. As discussed above, Applicants' claims as presently amended are directed to a compound of Formula I



wherein, among other structural characteristics, Ar is



and R is linear or branched C₂ to C₅ alkyl chain or 2-propenyl.

By contrast, each of the cited references discloses a compound where the moiety of the disclosed compound corresponding to Ar or R is either 1,3-benzodioxol-5-yl or methoxy, respectively.

The disclosure in each of the cited references is not a disclosure of a claimed compound. Thus, none of the references cited above anticipates the present claims.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

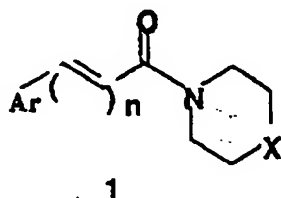
5. Rejection of Claim 1 under 35 U.S.C. §102(e)

The Office Action rejects claim 1 under 35 U.S.C. §102(e) as being anticipated by Raman et al. (U.S. Pat. 6,346,539). As the basis for this rejection, the Office Action states:

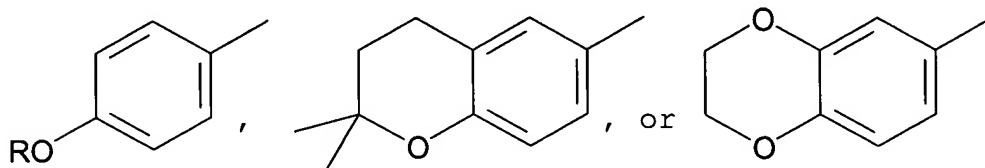
Raman et al. disclose compound RV-B03 in columns 23-24 and compound RV-A02 in columns 29-30 which are embraced

by the instant claimed invention.

Applicants respectfully traverse this rejection on the basis that Raman et al. fails to teach the claimed subject matter, as amended. As discussed above, Applicants' claims as presently amended are directed to a compound of Formula I



wherein, among other structural characteristics, Ar is



By contrast, Raman et al. discloses a compound where the moiety of the disclosed compound corresponding to Ar is 1,3-benzodioxol-5-yl.

The disclosure in Raman et al. is not a disclosure of a claimed compound. Thus, Raman et al. does not anticipate the present claims.

Accordingly, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

6. Rejection of Claims 1 and 2 under 35 U.S.C. §103(a)

The Office Action rejects claims 1 and 2 under 35 U.S.C. §103(a) as being unpatentable over Oediger et al. (U.S. Pat. 4,209,445) and Raman et al. (U.S. Pat. 6,346,539), each taken alone. As the basis for this rejection, the Office Action states:

Oediger et al. (U.S. Pat. 4,209,445) and Raman et al. (U.S. Pat. 6,346,539), each taken alone.

Oediger et al. (column 1, lines 54-68; column 2, lines 1-2; and Example No. 3 in Table 1 in columns 7 and 8) and Raman et al. (column 3, lines 1-40; compound RV-B03 in columns 23-24; and compound RV-A02 in columns 29-30) each teach arylalkenoic acid heterocyclic amide compounds which are either structurally the same as (see above 102 rejections) or structurally similar to the instant claimed compounds.

Ascertainment of the difference between the prior art and the claims (MPEP §2141.02). The difference between some of the compounds in the prior art and the compounds instantly claimed is that the instant claimed compounds are generically described in the prior art. ...The indiscriminate selection of "some" among "many" is *prima facie* obvious, *In re Lemin*, 141 USPQ 814 (1964). The motivation to make the claimed compounds derives from the expectation that structurally similar compounds would possess similar activity (e.g., treating skin conditions).

Applicants respectfully traverse this rejection. To establish a *prima facie* case, the PTO must satisfy three requirements. First, the prior art reference must teach or suggest all the limitations of the claims. *In re Wilson*, 424 F.2d 1382, 1385, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970). Second, the prior art relied upon, coupled with the knowledge generally available in the art at

the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference. *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988). Third, the proposed modification of the prior art must have had a reasonable expectation of success, determined from the vantage point of the skilled artisan at the time the invention was made. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1209, 18 U.S.P.Q.2d 1016, 1023 (Fed. Cir. 1991).

Applicants claim a genus of substituted aryl alkenoic acid heterocyclic amides, which are disclosed and claimed as having utility as spicy and pungent food additives. As discussed above, none of the cited references discloses a compound as presently claimed. As the Examiner candidly admits, the cited references teach use of the compounds disclosed therein for, for example, treating skin conditions.

The Examiner has cited no reference which teaches or suggests that compounds useful for treating skin conditions also are useful as spicy and pungent food additives. To the contrary, one of ordinary skill in the art would almost certainly be discouraged from using spicy and pungent compounds for treating skin cancer, and would be unlikely to consider using compounds useful in stimulating melanocyte proliferation as a food additive.

The Examiner relies on two arguments: (1) that the instant claimed compounds are generically described in the prior art, and (2) that Applicants careful selection and testing of the claimed compounds is somehow an "indiscriminate" selection of some among many.

Regarding the former point, Applicants observe that a species or subgenus is always patentable, as a selection invention, over a previously disclosed genus which does not teach or suggest the particular species or sub-genus which is later claimed. This is true even if the utility of the genus and the utility of the species or sub-genus are the same. Whether the holder of the patent to the species or sub-genus has freedom to operate, or requires a license from the owner of a patent to the genus, absolutely *does not* effect the right to obtain a patent to a non-obvious species or sub-genus.

Regarding the latter point, the Examiner has offered no evidence that Applicants' careful selection and testing of the claimed compounds is in fact "indiscriminate." To the contrary the only reasonable inference that may be drawn from Applicants' having made and tested the claimed compounds, and then having incurred the effort and expense of filing and prosecuting a patent application, is that Applicants work was throughly and completely discriminating.

In the absence of any teaching or suggestion in the cited references that the prior art piperine compounds and derivatives, used for treating skin conditions, should, with a reasonable expectation of success apparent to one of ordinary skill in the art, be modified to produce the particular substituted aryl alkenoic acid heterocyclic amides useful as a spicy and pungent food additive, as claimed herein, the claims of the present application cannot be obvious over Oediger et al. (U.S. Pat. 4,209,445) or Raman et al. (U.S. Pat. 6,346,539).

Accordingly, Applicants respectfully request that the Examiner reconsider and withdraw this rejection.

CONCLUSION

Based upon the above remarks, the presently claimed subject matter is believed to be novel and patentably distinguishable over the prior art of record. The Examiner is therefore respectfully requested to reconsider and withdraw the rejections of remaining claims 1-3 and 7-20, to allow pending claims 1-2 and 20 presented herein for reconsideration, and to rejoin claims 3 and 7-19. Favorable action with an early allowance of the claims pending in this application is earnestly solicited.

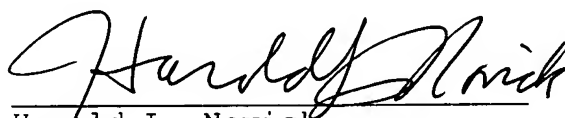
The Examiner is welcomed to telephone the undersigned attorney if she has any questions or comments.

Respectfully submitted,

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